Social Capital, Creative Destruction and Economic Development

Bezemer, Dirk; Dulleck, Uwe; Frijters, Paul

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Dirk Bezemer, *University of Groningen*

Uwe Dulleck, *University of Vienna*

Paul Frijters, *National Australian University, Canberra*

Abstract

This paper develops a conceptual framework for the role of social capital in the political economy of innovation, growth and reform, with illustrations from developing and transition countries. It identifies separate but related roles for the individual and communal interpretations of social capital. It argues that economic growth via innovation requires the creative destruction of individual social capital linkages and discusses the roles of communal social capital and formal market institutions in the process. A negative externality associated with creative destruction implies the possibility of growth accelerations as well as growth traps.

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Address for Correspondence:

Dirk J Bezemer

Department of Economics

WSN building rm 527, Landleven 5

9747 AD Groningen, the Netherlands

1. Introduction

This paper addressed two central issues in the current debate on social capital and develops the implications of a new theoretical view, building on previous work. The first issue is a confusion between (and sometimes conflagration of) the individualistic and communal notions of social capital. The second issue is the material benefit that social capital tends to bring - an empirical finding which drives much of current research interest within the economics profession, but the mechanisms of which have received scarce theoretical attention.

These questions go to the heart of the social capital debate. This paper therefore aims to develop a comprehensive view of social capital and its relation with production, innovation and the political process in an accessible, largely non-technical manner (although ideas will be illustrated with production function and network theory analogies[1]). Because of this conceptual aim, it is helpful to clearly set out the chain of ideas developed in advance. In the framework presented below, four claims about social capital will be made:

(i) It is useful to conceptually decompose social capital into an individual component (termed 'Relational Capital') and a community-level component (termed 'Communal Social Capital'). This allows for an examination of their separate roles in the economic process. 'Relational Capital' is comprised of the contacts that economic units use in trading outputs and inputs and in innovating. 'Communal Social Capital' is related to trust and norm-adherence and it aids the generation of Relational Capital. This explains how both community-level and individual social capital bring economic benefit, in different but related ways (sections 3 and 4).

(ii) Increasing productivity via innovation requires that an economic unit dissolves 'Relational Capital' contacts with other units and forges new transaction links, using 'Communal Social Capital'. This points to the specific role of social capital in generating growth and structural

change, particularly in new markets and emerging economies. It also suggests why it features large in the economics of development and transition, where innovation and growth are central concerns (section 5).

(iii) Innovation and accelerating growth require that such 'creative destruction' of 'Relational Capital' occurs on a large scale and speedily, but the typically limited span of informal, personal 'Communal Social Capital' networks restricts this process. This limitation invites the creation of formal, impersonal institutions, which perform a similar role but at higher levels of efficiency. This observation points to the ambiguous role of informal networks, which aid transactions in developing economies but which may also compete with more efficient alternatives, creating the possibility of growth traps (section 6).

(iv) While the renewal of 'Relational Capital' and the creation of market institutions may be beneficial to the innovating unit and, in the long run, to the overall economy, it implies a negative externality to other economic units and, in the short run, to the economy. This helps understand the short-run costs of economic changes that entail large-scale replacement of 'Relational Capital' contacts, which is again particularly relevant to developing (and transition) economies. These costs also point to political economy explanations for the success or failure of the creative destruction process. The negative externality generates opposition to economic changes that, if located within a political elite with control over the economy, may smother the innovative process. Systems with such 'adverse centralisation' are less likely to include incentives to innovate, but they also endogenously generate the tensions that foster decentralisation, whether suddenly by a regime change or via a more gradual political process (section 7).

The paper concludes with an evaluation of current growth policy recommendations in the light of this framework illustrated by experiences from the post-Socialist transition process (section 8), and a discussion of the limitations and possibilities of the framework (section 9). The next section positions the present approach within current thinking.

2. The Problem of Aggregation in the Social Capital Debate

A fast expanding literature on social capital discusses definitional issues (Woolcock and Narayan, 2000; Paldam, 2000; Piazza-Georgi, 2002), develops theoretical models tracing the role of social capital in a stylized economy (Della Giusta, 1999; Glaeser et al., 2002; Routledge and Von Amsberg,

2003), and empirically links it to growth and poverty reduction (Knack and Keefer, 1997; Inkeles, 2000; Krishna, 2001). The concept of social capital itself remains surrounded by major conceptual difficulties. This has led some to dismiss the construct altogether (Fine, 2001), while others urge more theoretical work to clarify the definition and role of social capital (Sobel, 2002).

Social capital is perhaps most inclusively defined as "the norms and networks that enable people to act collectively" (Woolcock and Narayan, 2000), reflecting both the individualistic and communal notions of social capital. Likewise in empirical studies, social capital is typically measured as either the number and intensity of linkages between economic actors; or as the general level of 'trust', or the extent of civil society (Durlauf, 2002). How these individual and social levels relate to each other and how to distinguish between them, is a major conceptual issue in the literature on social capital[1].

One view is that social capital is the social component of human capital, as in Glaeser at al. (2002). They define social capital as "a person's social characteristics- including social skill, charisma, and the size of his Rolodex - which enables the reaping of market and non-market returns from interactions with others". They implicitly concur with Arrow's (1999) point that the word 'capital' suggests a resource that can be individually accumulated and transferred, and that hence the term social capital should not be used for attributes that cannot be accumulated at the individual level. In their analysis, Glaeser at al. (2002) essentially treat investments in social capital on a par with investments in education.

Alternatively, social capital is equalled to 'trust', 'community networks', or, more generally, some form of adherence to community norms. For instance, Robison et al (2002) argue that social capital should be viewed as 'sympathy'. As the defenders of this argument, Bowles and Gintis (2002) argue that social capital does not equate with an individual asset, but is nevertheless a form of capital on the community level. Other critics of the social capital literature have also argued that it is overly microeconomic, and pretends to analyse social processes while adhering to traditional, atomistic models of behaviour (Fine, 2001).

This basic tension between the individualistic or communal connotations of social capital is also reflected in doubts about the empirical validity and usefulness of the term. Durlauf (2002) re-analyses the evidence and concludes that "the concept itself has proven to be too vague to permit analysis whose [*sic*] clarity and precision matches the standard in the field" and that "there are limits to what can be learned about social capital from conventional data sources". The perennial difficulty is often how and at which level social capital should be measured, reflecting the ambiguity of the term. Durlauf hence calls for sharper theoretical modelling of social capital, as well as more directed empirical work. Sobel (2002), noting the same ambivalence of the term, defines social capital as "circumstances in which individuals can use membership in groups and networks to secure benefits". He explicitly acquiesces in the fact that social capital at the moment is a "multi-faceted term". The first aim of this paper is to attempt to contribute to a conceptual analysis of social capital.

The economic study of social capital is motivated by its apparent relevance to income and economic growth. Most authors writing on social capital, however they interpret it, seem to agree that social capital is beneficial for incomes, production, and innovation, as the following cases illustrate. Aquilera (2002), using the 2000 Social Capital Benchmark Survey, finds that "friendship networks are generally positively related with increased labour force participation". Temple (1998) finds that social capital differences explain much of the variation of growth performance among African economies. Maluccio et al. (2000) and Carter and Maluccio (2003) using a household panel data set in South Africa, find that social capital had a positive effect on per capita expenditure in 1998 and that "[h]ouseholds in communities with more social capital … seem better able to weather shocks". Grooteart et al (2002) find that higher levels of social capital are associated with higher household per capita expenditures and better access to credit for rural households in Burkina Faso. Buerkle and Guseva (2002) find in a study on Poland and the Czech Republic that "social capital gained while in school has an independent effect on individual income". Rupasingha et al. (2000) use regression analysis on U.S. county-level data and find that social capital has an independent positive effect on the rate of per-capita income growth. Many more such findings exist, for different settings (see also the

references in Putnam, 2000). A second major question is therefore how exactly social capital tends to bring material benefit[2].

3. Decomposing Social Capital

The main conceptual suggestion in this paper is to decompose social capital into an individual component that is directly productive (termed 'Relational Capital', or RC[4]) and social/community networks (termed 'Communal Social Capital') and the general level of trust and adherence to norms that accompanies them, which are indirectly productive. RC is comprised of the contacts that economic units (firms, households, or even towns or regions) use in trading outputs and inputs and in innovating. This conceptual distinction addresses both dimensions of social capital. It will be used to analyse why social capital brings material benefit. In short, the argument will be that Communal Social Capital helps to create RC linkages, while RC itself is directly economically beneficial through its role in transacting and innovation. Both these roles of RC are discussed in detail in the next two sections four and five. It will now first be argued how Communal Social Capital is useful in producing RC.

Social networks consist of relations and can be seen as clubs in the sense of subgroups with entry barriers within a wider population. By having restricted and screened entry, they reduce heterogeneity within the club, compared to the population at large. Within the club, members can launch searches for other members with particular economic characteristics. Effective clubs select at entry on characteristics, such that search within that club is for certain types of players only (an example is a business association). The chances of successful search within the club are larger than in the economy at large, and its costs smaller.

The role of information is central in this. Communal Social Capital is not itself information, but it facilitates the exchange of information. This, in turn, reduces the costs of search and therefore the costs of creating RC. Based on the trust that develops in restricted networks (Williamson, 1985; Fukuyama, 1995), information is more easily exchanged, because "[t]hrough the economic and social relationships in the network, diverse information becomes less expensive to obtain" (Malecki, 2000).

Trust deepens the network, provides an environment for more information exchange, facilitates coordinated action (Putnam et al, 1993) and thereby reduces transaction costs. These costs include search costs and the costs of explicit contracting and activation of pre-commitment devices. Hence Communal Social Capital may act as a search friction-reducing club, as Moen (1997) discusses with respect to the labour market.

Search clubs are particularly helpful in environments with heterogeneity, with lack of information, or with very few participants - conditions typical of new markets, and of developing and transition economies generally. Heterogeneity causes high search costs and offers lower chances of finding productive linkages. If these costs are prohibitively high, the search process stalls and no new RC linkages can be created. Being linked up in denser Communal Social Capital networks makes it less costly to search for RC linkages. Conversely, thin Communal Social Capital networks may raise search costs to prohibitive levels, so that the economy either falls into a low RC/low growth trap or needs to develop other search devices.

It is important to emphasise that Communal Social Capital is conceptually different from, but in practice overlapping with, RC: a productive contact (RC) is often also an informal search channel itself. There is then a search externality from the creation of more RC, in parallel to the classic Diamond (1982) argument of thick markets - if there are many economic units operating in a market, then one can expect to find a unit relatively quickly in that market. A market with many points of contact will attract more players simply because the price of finding others decreases (as also in Howitt and McAfee, 1992). In sum, Communal Social Capital aids the generation of RC and the process of RC creation is a self-enforcing process.

4. Relational Capital: Tool for Transacting

While Communal Social Capital is used to build RC, RC itself increases output, in two ways. It is an input in sold output and as such indispensable for profitably producing, as will be explored in this

section. Moreover, the replacement of old contacts by new ones is a prerequisite for technical progress, as will be argued in the next section.

RC is an input in the *sold* output of a representative unit. Following the New Institutional literature (Williamson and Masten, 1999), the sale of outputs and the purchase of inputs are integral parts of the productive activity of a unit (whether firm or household). Subsistence production apart, output that cannot be sold has hardly any economic value, and will not be produced in the first place. Likewise, inputs that cannot be purchased cannot be used in the physical production process. To sell outputs and buy inputs, contacts with suitable trading partners need to be established and maintained. If contacts are necessary to buy and sell, then RC is a necessary input into sold output. Having more contacts allows increasing specialization, which brings economies of scale and of the deployment of comparative advantage. The more contacts, the more outsourcing is possible. In essence, this paper is an attempt to trace the implications of these simple facts[5].

To pinpoint this first role of RC, it is useful to literally consider it as a capital: an input in the production process (as also in Westlund and Bolton, 2003; Robison et al, 2002; though note that these authors lump together individual and communal aspects of social capital). Pursuing the analogy, consider a conventional production function[6] where physical production depends on inputs of conventional capital and labour, but *sold* output depends also on RC. The only special assumption that needs to be introduced is that labour is allocated to either the production process, which is blue-collar labour, or to the creation of RC, which is white-collar labour. RC creation is therefore the white-collar complement of physical production; in a corporate setting, it is 'what managers do', both within and between organizations The implications can be usefully discussed with reference to a production function incorporating RC which would take the form:

$$y = f((L - L^{rc}),K,RC,A),$$

where y denotes the sold output of a unit, A denotes the quality of the technology used, L^{rc} is the amount of labour that is used to create and replace RC and L-L^{rc} is the remaining productive labour.

The three key assumptions underpinning the assertion that it takes labour to find contacts are that (i) there is a trade-off between labour used for physical production and for the creation of RC, (ii) business partners are heterogeneous (hence one must search for the right one), and (iii) there are search frictions (hence the search costs time) [7]. Parties cannot easily find other suppliers and clients once a relation is discontinued, because they can only buy their inputs from specific groups and sell their output to other specific groups. These assumptions link in with a New Institutional view of markets. Finding contacts incurs transaction costs for information search and sharing, bargaining, and defining property rights (North, 1990). This heterogeneity is also basic to all models with search frictions - although usually not modelled explicitly (e.g. Pissarides, 1990) - and is a departure from the standard homogeneous atomistic market model because units operate in *networks* (not disconnected sets) of *heterogeneous* (not identical) units.

5. Creative Destruction: Innovation is Painful

A second role of RC follows from the argument that innovations requires the destruction and replacement of some relations. The rationale is again straightforward. Technological progress involves changing the production process. This involves new clients and new suppliers. Adopting new technologies or new market partners therefore renders some of the previous contacts obsolete. These have to be replaced.

This function of RC can also be understood in terms of a production function approach, where the technology parameter A reflects the gap between a unit's technology and the best technology available (the 'technological frontier'). Through replacing old contacts with new ones (RC replacement), units are able to approach the technological frontier. This frontier itself is exogenous (at least in developing and transition economies), but with innovation the gap between the unit's technology and the frontier decreases due to RC replacement.

The assumption that raising productivity requires the reallocation of contacts and resources derives from Schumpeter's view that invention and innovation are crucial to economic advancement. As Schumpeter (1934:74) put it, "[t]he carrying out of new combinations we call 'enterprise' " . In this sense, the destruction of old contacts and old ways of organizations in order to find better technologies is 'creative destruction' [8].

This interpretation is also a reflection of contemporary empirical evidence from diverse settings, as the following cases illustrate. Pavcnik (2000), using plant-level panel data on Chilean manufacturers, finds evidence of within-plant productivity improvements following the Chilean liberalisation of the early 1980s, which she attributes to "the reshuffling of resources and output from less to more efficient producers". Grant (2001) presents evidence from primary and secondary data on reallocation of enterprise contacts in Ghana as a means to achieve innovation. Murphy (2002) finds that social networks of business people in Tanzania support innovation in manufacturing firms because these networks help them search for the replacement of former business partners. Cooke and Wills (1999) find that a sizeable proportion of firms in samples from Denmark, Ireland and the U.K. report that "social capital building was associated with enhanced business, knowledge and innovation performance". De Haan (2001) researched a project to disseminate improved goat breeds in Tanzania, and found that "internal [village] processes are crucial in understanding technology transfer… a person's social capital did determine whether a member got a goat" (i.e. could implement the technological innovation). Finding, without high costs, the right contacts to replace obsolete ones, is vital to innovation.

This RC replacement carries an externality as it implies destroying old relationships. While the amount of own RC remains constant for the unit doing the replacing (one old contact is replaced by one new contact), the former business partner's RC diminishes. If this business partner depended entirely on this contact to survive, it may have to close down, thereby destroying all contacts with units it deals with, who in turn face the same problem. But also if it can replace the old contact with a new one, it will inflict an externality on a third unit. In sum, this externality is inevitable and generates

an economy-wide impact (loss of contacts) of any unit's RC replacement. Thus, RC replacement may be individually rational but collectively harmful.

How large this loss is depends on whether a unit is part of a large chain of units whose production depended on it. In a relatively centralised economy, where such chains of dependence are long, the 'collateral damage' from RC replacement may be large. If production chains are short, as in a decentralised economy, the damage will be smaller.

Within this framework, consider two factors that are pivotal in innovation and growth. The first follows from the production function approach; it is the conversion rate of (white-collar) labour into relations. In terms of the search literature, this can be interpreted as the arrival rate of contacts. The circumstances that affect contact and destruction rates in search theory (as presented in Ashenfelter and Layard, 2000) would seem to carry over to the conversion rate of (white-collar) labour into relations: greater geographic or cultural distances and more complex and specific production would decrease the conversion rate, for any given search mechanism (such as Communal Social Capital). The next section argues that an economy-wide increase in this conversion rate is central to economic growth, and that formal institutions replacing informal Communal Social Capital may greatly increase this conversion rate.

The second factor controlling the scope for innovation and growth is the extent to which the innovating unit will be forced to internalise the negative externality. What is the cost, if any, that one unit incurs when it breaks a contact with another unit? This depends on the existence, power and intentions of a third party able to reallocate the externality costs towards innovators – effectively, to punish them for breaking contacts and innovating. Since this requires power, this third party is therefore by definition a political entity, and the argument in Section seven will be that the configuration of the polity is important in understanding whether innovation is frustrated by raising its costs.

6. Communal Social Capital and Formal Institutions

A low-growth economy can accelerate by updating technology, which requires that the replacing of RC also accelerates. It can also accelerate growth by increasing (not replacing) the 'stock' of RC. Both processes depend on a decrease in the labour-RC conversion rate (the time needed to create contacts). Institutions that either directly form a conduit for finding new contacts or promote them indirectly by quality monitoring will facilitate such faster conversion. Thus, for economies to experience a sustained high-growth development path, inefficient search institutions need to be replaced with more efficient institutions. This section will make two arguments about the process. First, that formal institutions on the one hand and Community Social Capital on the other hand are (at least partly) substitutable. Second, that this substitution is not merely possible; it is necessary for a high-growth economy to develop.

To illustrate the concrete processes that are represented by this abstract description, consider some empirical evidence in support of these two arguments. Katz (2000), in a comparative analysis of two regions in Guatemala, shows that "the existence of social capital can substitute for well-defined legal property rights in both private and common property resource tenure regimes". Wallace (1999) analysing small-scale cross-border trade in Eastern Europe, concludes that "in a risky environment, where trading is either illegal or only semi-legal, small-scale traders try to minimise risk by building up different kinds of relationships with customers, representatives of the law and partners in trade. In the absence or inadequacy of formal institutional regulation, informal regulation through social capital becomes important". Ferrary (2003) shows by an analysis of financial counselors' practices how lack of formal creditworthiness information leads them to establish more intensive social bonds with loan applications and borrowers, which then become an alternative channel for monitoring and information collection. Bowles and Gintis (2002) argue that "community coordination" improves good governance by "addressing market and state failures". Winn (2002) reports that social networks in Chinese society have survived the growth of formal legal institutions and liberalization of China's

economy, but also that they are currently under pressure from the spread of electronic commerce technologies which strengthen legal institutions and open local markets to international competition.

All this suggests that the informal mechanisms - which these authors term social 'capital', 'networks', 'bonds' and 'relationships' - are used for the same purposes as formal market institutions such as 'well-defined property rights', 'informal institutional regulation', 'creditworthiness information', 'monitoring and collection of information' and 'formal legal institutions'. These studies show that agents substitute one for the other as circumstances dictate - using formal mechanisms where possible and informal institutions where necessary[9]. They can do so because both are alternative ways to perform "search, select and sort" functions. It has already been explained how social networks do this: by acting as search clubs, reducing search costs and facilitating RC contacts creation. It will now be shown that fundamentally, market institutions do it much the same way - in fact, the argument is that this similarity is why they are substitutable, as the empirical literature quoted above suggests.

Firms and households on markets are heterogeneous (e.g. in their credit-worthiness or reliability). This creates free-riding behaviour of low-quality units on the existence of high-quality suppliers or clients. Other things apart, this information asymmetry would prevent efficient search and matching, drive prices down, force high-quality units out of the market, and so "thin out" the market to the point where it collapses, as Akerlof (1970) has seminally shown.

In reality, this does not happen in developed economies. Private and public institutions for quality control, monitoring and sorting generate information and divide units into more homogeneous subgroups. They thereby overcome information problems. Private solutions include banks, which screen, select, sort and monitor creditors and lenders. Public institutions include courts and Chambers of Commerce, which screen new members. Other institutions can be either public or private: credentialist systems (e.g. education certification), food standard agencies, and the like. Hence both public and private market institutions are, in this respect, like search clubs - just as Communal Social Capital networks, such as those of civil society and kinship.

The essential characteristic of these and other market institutions is that they (a) are universal in that they aim to cover all units, (b) are specific in that they deal only with a very specialised subset of possible productive connections, and (c) have economies of scale in that each extra connection leads to a more than proportional increase in the number of possible trading opportunities: by linking to a market institution one benefits from all connections in the network. The economies of scale typical of market institutions are the reason they can only appear if the market is sufficiently large. Scale economies, and associated larger efficiency, also explain why market institutions crowd out Communal Social Capital networks over time, as they gradually take over their economic role.

In comparison, Communal Social Capital networks are relatively inefficient search devices because formal institutions exhibit far larger increasing returns to scale in monitoring and sorting. For instance, an informal lender can, through her contacts, know about and assess perhaps twenty borrowers, and link them to a similar number of lenders. Commercial banks can have portfolios of millions of borrowers and lenders. The number of RC linkages (as between borrowers and lenders) that a single market institution is able to create is typically many times that attained by informal institutions. The relative inefficiency of Communal Social Capital networks implies that its deployment limits growth, and its replacement is required for a growth acceleration.

It is helpful to think about the differences between Community Social Capital and formal institutions in terms of graph theory. Community Social Capital clubs are networks smaller than market size, where the connections between units can carry any type of information. In contrast, formal institutions connect every market party with every other market party, but they only convey very specific information. This network of linkages is more efficient but not multi-functional, as Community Social Capital is.

It would be wrong to conclude from this that any attention to Community Social Capital in growth policies is misplaced – as if one must simply build formal institutions to attain scale economies. This ignores the sequencing issue connected to Community Social Capital in building market institutions, based on those very scale economies. Markets institutions will only come to be

built if there is demand for them. They deliver quick and efficient contact search and matching - but who will want this unless there is a sufficient number of units in need of (better) contacts? Because formal institutions exhibit increasing returns to monitoring, they will emerge only above a threshold number of units in need of contacts, which justifies their set-up costs. There will be no demand for them until the 'market for contacts' is sufficiently thick. Before that point, to facilitate RC creation the economy must rely on Communal Social Capital. These networks push a pre-capitalist economy to the point where it becomes profitable to introduce market institutions.

Paradoxically, then, dense initial Communal Social Capital networks may well be required for an economy to enter upon a growth path that will eventually replace those very informal networks by market institutions[10]. There are 'stages of growth', as Rostow famously put it, and Communal Social Capital is central in moving beyond his second stage (of five) of 'creating the conditions for take-off' : "[T]he take-off awaited … the build-up of social overhead capital and a surge of technological development in industry and agriculture, but also the emergence to political power of a group prepared to regard the modernization of the economy as serious, high-order political business" (Rostow, 1960:6). To these political dimensions we now turn.

7. Political Economy: Meddlers and Mediators

Social and political processes are central to explaining economic development, and to some a social capital literature that does not address the political economy of growth seems to be missing the main point (Fine, 2001). In this paper the relevance of politics to growth hand innovation originates in the fact that typically, economic units need to interact with a third party and incur costs in order to make and replace contacts.

There are two components to these costs. The first is the labour costs of finding a new contact, which depends on the available search mechanisms and the thickness of the market. The second component is any costs created by third parties that are external to the creative destruction

process itself. Because imposing such costs requires power that is not based on the economic process itself (it is not market power), the "third party" is typically part of the political-administrative apparatus, from which position it derives power over economic units. The more politicians and bureaucrats are (or make themselves) necessary in the process of creative destruction, the larger such power is. This amounts to some degree of centralisation of the economy, where any two economic units cannot deal with each other independently, but need the endorsement or services of the polity. In the extreme situation of complete centralisation, contacts can only be made and maintained politically, and the polity has complete discretion over the associated costs. Depending on the shape of the political-economic system, innovation via 'breaking up' may be made to be efficient or costly to the initiator - rather than only to the discarded partner - by political means.

There is the possibility of 'benign centralisation'. Politicians and bureaucrats can *mediate* in the process of creative destruction because they "regard the modernization of the economy as serious political business". In many historical examples, some sort of central co-ordination of the economic process by political leaders has been essential to a growth acceleration, as Rostow's (1960) and other works attest. In terms of our framework, they do so indirectly by decreasing the first cost component - i.e. by the creation or facilitation of institutions that decrease the conversion rate of labour into RC - and by abstaining from imposing the second cost component, which are artificial costs for transacting based solely on their position of political power.

But there are powerful incentives built into the creative destruction process for the alternative of 'adversely centralised' economic co-ordination, where representatives of the policy *meddle* with its costs, blocking the emergence of efficient market institutions – on purpose or inadvertently. Systems that are centralised suffer from a span-of-control problem in that no single entity could possibly keep track of the millions of productive opportunities that continuously present themselves to economic units. The centre can therefore not mimic creative destruction, as famously argued in the 1930s Mises-Lange debate - but nor can it allow it to happen spontaneously since the continuous re-alignment of contacts dilutes its power, and changing contacts are hard to control. Indeed, in the literature on

centralised Soviet-type command economies the technological lag is often cited as a major reason for their collapse (e.g. Gros and Steinherr, 1995; Aslund, 2002).

Moreover, creative destruction creates losers within the economy. With political influence of the centre over the economy, the losers have an incentive to lobby the centre to use its power to prevent creative destruction. Such intentionally adverse centralisation may occur in socialist, centrally planned economies following the Soviet model, in dictatorships, or in some form of "crony capitalism" - i.e. an economic system where access to a political elite equals economic influence. It is then very costly, say, to break up contacts with the firm of the president's son; conversely, support from the elite is indispensable for obtaining new contacts. Indeed lobbying by enterprises for state intervention against competitors was prevalent in socialist systems (Braguinsky and Yavlinsky, 2000) as well as in the, as yet, incompletely decentralized transition economies. Lobbying is pervasive also in many traditional developing economies (Rama, 1993). Thus, politicians' interference with firm level decision making invites firms' reliance on politicians to deal with their competitors, and an unhealthy symbiosis may develop.

Another way to put this is to note that official or implicit centralisation is a reflection of poorly defined property rights. With planners, dictators or crony economic elites, ownership over resources, including RC, can be re-allocated at any time by those in power. As Maitland (2001) shows for the case of Vietnam, abuse of public office there takes the form of "a distortion to property rights, including the re-assignment of private rights as the result of lobbying or rent-seeking activities." In the more decentralised economies, political meddling with property rights is typically restricted; where present, it takes more covert forms. In other East Asian capitalist economies, enterprise ownership is often held by families, which in turn are typically well-connected to the political system; the Indonesian Suharto regime was one example. Faccio et al (2001) find that outsider shareholders in East Asia are effectively expropriated by dividends paid out to owning family members.

Destroying an old contact creates losers who can alert politicians to an opportunity for expropriation. Some degree of centralisation thus makes it worthwhile for units to lobby the political

centre not to allow creative destruction by other units. In contrast, adding contacts whilst not destroying old ones (expansion but not innovation) does not generate losers. Uncertainty over property rights thus discourages investment in RC generally, and discourages *replacing* old contacts - vital to innovation - in particular.

8. Liberalization and Growth: Pain or Gain?

In the preceding sections three to seven the elements of the new theoretical approach to social capital were presented. In this section the relevance of this framework to understanding contemporary policies and experiences will be illustrated. This can be conveniently done by considering the policy prescription for successful economic development that has been most popular over the last few decades. That advice has been 'market liberalisation' of some sort which, broadly speaking, comprises the introduction of more competition and of more decentralised decision-making.

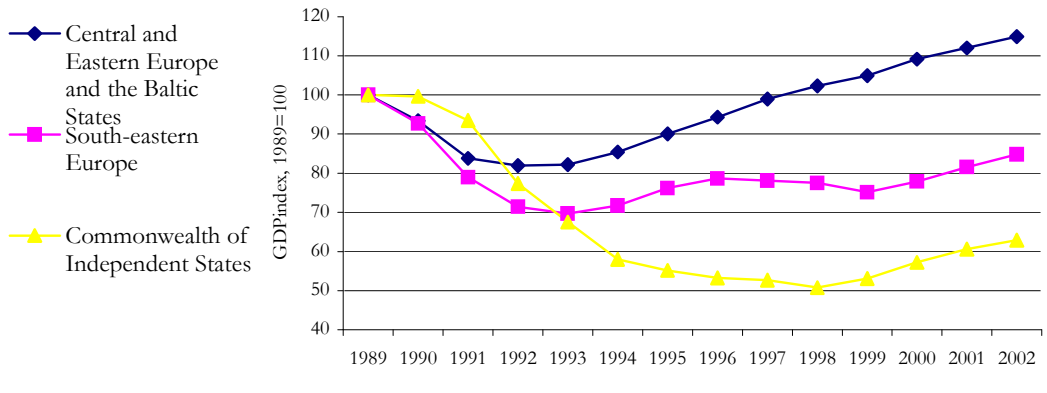
In terms of the present framework, there are two necessary assumptions for market liberalisation to improve growth. The first is that centralisation is predominantly of the 'adverse' type, and that decreasing or removing it increases the labour conversion rate of RC. The second is that the gains of the winners from creative destruction outstrip the losses of the losers. The latter is not a foregone conclusion in the present approach: depending on the degree of centralisation in the systems, negative externalities may be compounded and could well be larger than any gains. Moreover, once RC replacement is below a threshold level, the self-enforcing nature of growth via creative destruction implies the possibility of a growth trap. This suggests that market-oriented reform is more complex than just implementing a switch to a better growth path, even though that is how many models of development treat it. Specifically, it is likely that due to the externalities of the choices of individual units, changes in constituent part of the system may lead to either endogenous decline or growth. It also suggests that reform may be politically hard, as firms and politicians in 'crony' systems exist in symbiosis. Political-economic reform changes the nature of the system, rather than merely

improving its performance. This section presents an application of the framework to the varied outcome of the radical and large-scale market reform project that is known as the 'transition' of the post-Socialist economies.

The two central factors that control the success of such systemic change were identified as (i) the rate at which labour is converted into RC and (ii) the cost a unit incurs when it breaks contacts with another unit. In the benchmark case of the perfect market ideal – ideal in the sense of a stylised reference situation, not in the sense of an outcome that is *per se* desirable or possible - , both these costs are absent: search is costless and there is no political 'meddling'. In contrast, a stylised characterization of socialist economies would be one with top-down contact assignment prohibiting - or placing very high costs on - *RC* replacement high costs for *RC* creation. The systemic change of 'transition' can then be represented as a one-off unanticipated decrease in the cost a unit incurs when it breaks contacts with another unit. In reality, broadly two scenarios have been implemented, which might be dubbed the 'European' and the 'Asian' varieties of transition.

In the European model, the start of reform coincided with the implosion of the political-economic system. It led in all 27 European transition countries to a fall in output during three to eight years, a fall "never before experienced in the history of capitalist economies (at least in peacetime)" (Mundell, 1997). Figure 1 illustrates.

Figure 1: Development of GDP in Transition Regions, 1989-2002 (Source: EDRD, 2003)



This experience is quantitatively extreme but qualitatively representative of a wider pattern. Greenaway et al (2002) survey the experience of 73 developing countries, which implemented 'deep' market liberalization programs over the last two decades. In a panel data analysis, they demonstrate that market liberalization is typically followed by a J-curve or U-curve output response over time: output falls steeply initially and recovers afterwards (though not necessarily to pre-reform levels). As in the case of post-communist transition, this was an initial surprise to analysts, since the 'freeing up of market forces' was generally expected to lead to immediate output gains.

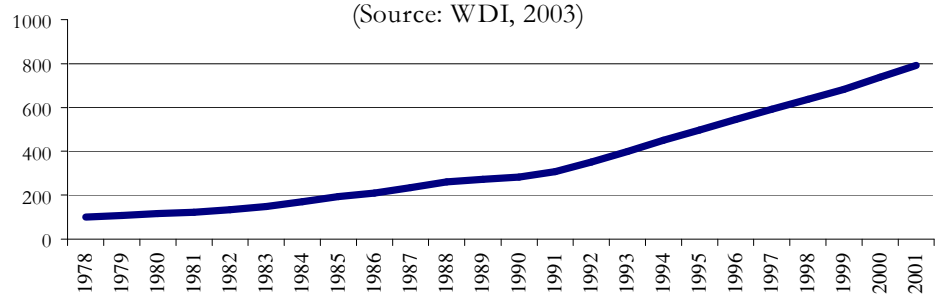
How can this experience be interpreted using the framework here developed, with no special additional assumptions?[12] If units are operating under technologically backward conditions (as in the former Soviet bloc towards its end) and are prohibited from replacing their business contacts, they have large incentives to engage in creative destruction, but cannot do so. Sudden removal of this prohibition then triggers large-scale creative destruction. As demonstrated, this is individually rational but can be collectively harmful in the short term, especially in economies that are highly centralised, and were long chains of units are interdependent. The result is a large net loss of RC initially, and a concomitant decline in output. Because of complementarities, it is accompanied by a reduction in the marginal value of other production factors labour and capital. This concurs with observed increasing incidences of poverty and capital flight after market liberalisation measures, of which the post-socialist transition is again an extreme example. Over time, progressively smaller RC losses and increased technological levels in the surviving units due to the creative destruction they implemented start to counter this trend. In the optimal case, eventually this leads to growth levels higher than pre-reform, due to faster catch-up towards the technological frontier (as in Central Europe). But where RC levels have declined below threshold values, the self-enforcing nature of RC creation may keep the economy in a low-growth trap (as in the former Soviet Union).

Is there an alternative to the particularly painful creative destruction of big bang reforms? A dual-track approach, where units' decision-making is decentralised but some restrictions on the mobility of labour and capital are maintained, appears successful. Its best known application is in mainland China

(Tian, 1999). As Roland and Verdier (2003) comment, such "dualism follows the scenario of Chinese transition where the government keeps direct control over economic resources and where a liberalised non-state sector follows market rules". The Chinese experience is a way to restrict the actions of a sizeable proportion of the units in the economy, allowing only a fraction to engage in creative destruction, hence avoiding an accumulation of the negative externality and achieving smoother growth. Furthermore, as Lau *et al.* (2000) point out, the dual-track approach provides agents "being replaced" because of liberalisation with rights to claim compensation. Thus only efficiency-increasing contact replacements take place and replacing firms internalise the externality. This is one example from a wider literature on the critical importance of sequencing to the success of market reform policies.

Figure 2 depicts per capita growth in mainland China since the start of its reform in 1978. The contrast with the experience of other reforming economies of the (post) centrally planned type is striking. However, as the approach in this paper would suggest, this reform also threatens the symbiosis between politicians and firms; in China, political decentralisation pressures accompany the economic reforms, and it may well join the club of *post*-Socialist reformers in the foreseeable future.

Figure 2: Indexed real growth in GDP per capita, China (1978= 100)
(Source: WDI, 2003)



9. Summary and Conclusions

This paper provides a framework for the economic role of social capital. As its centrepiece, the notions of Communal Social Capital and Relational Capital were introduced. This captures the importance of contacts to the generation of incomes from entrepreneurship and employment. Informal, personalised social networks, termed Communal Social Capital, aid the formation of RC contacts. Growth vitally depends on acceleration in creative destruction, where new contacts can be created through market institutions rather than via informal networks, termed Communal Social Capital. In the spirit of Schumpeter, it was argued that in capitalist economic systems, the destruction of some contacts in search for better ones is an integral part of technological advancement. There is a negative externality to creative destruction, which implies an incentive for other units and, possibly, the state to hinder it.

Many politically controlled economies restrict such creative destruction, which, it was argued, leads to their technological backwardness. When such economies liberalise in a 'big-bang' fashion, they are likely to experience an initial output fall: technological catch-up implies high levels of destroyed and replaced relational capital. This not only has high direct opportunity costs (more labour is used for the production of relational capital) but also leads to a loss in overall Relational Capital, since there is a negative externality of creative destruction. This paper thus both explains the post-reform output collapse in all transition economies, and leads to support for dual-track approaches as currently in China, where systemic change is complete but only for a subsection of the production factors. It also holds lessons for other developing and emerging economies pursuing growth via market liberalisation policies

The paper adopts a nuanced view on the role of social capital in development. Economic growth is predicated on increasing and improving the stock of relational capital, or productive contacts. Community Social Capital aids firm and households in an underdeveloped economy to create

Relational Capital, which in turn may lead to the formation of market institutions; but these market institutions must then start to replace informal social-capital networks in their role of forging and renewing business contacts. Reliance on Community Social Capital should not be promoted as the main development tool, as is currently fashionable among many development NGOs and donors (as documented by Fox and Gershman, 2000; De Haan, 2001). But neither can one dismiss the role of community social capital in the development towards a market economy (as in Harriss and De Renzio, 1997). Social networks spur the initial growth in relational capital that leads to the profitability of market institutions. These, in turn, crowd out the same social networks from the economic sphere.

The paper's limitations relate to both its theory and applications. In its theory, the paper concentrated on the entrepreneurial and productive side of the economy and the role that the two components of social capital play. Many issues that affect the transition, development, growth and innovative activity in an economy were left out, including education, international integration, regulation, migration and the financial/monetary environment. These are beyond the scope of this study. In its applications, only the experiences of transition countries were considered, while a broader relevance to market liberalisation policies was suggested. In future work, the aim is to develop this application.

Notes

[1] In a companion paper we develop a formal model with simulations (Dulleck et al, 2004).

[2] Note that we do not ask why social capital tends to increase well-being, as is also frequently found (Killerby and Wallis, 2002). There may well be such a 'warm-glow' effect of social linkages; we focus exclusively on its material benefits.

[3] Bezemer et al. (2003) and Frijters et al. (2003) illustrate the present considerations using formal models and simulations.

[4] Frijters (2000) introduces a related concept of relational capital on the firm level and analyses the consequences for the wage and age structure of employees within a firm.

[5]These arguments are particularly relevant in situations of economic transition and development, where transacting problems often constitute the main barrier to enterprise development. The RC concept is also implied in transition

models, such as those of Blanchard and Kremer (1997) and Roland and Verdier (1999), where firms need relations to achieve sold output.

[6] See Bezemer et al (2003) and Dulleck et al (2004) for a detailed technical explanation of this approach.

[7] Dulleck et al (2004) formally show the implications of these assumptions

[8] Westlund and Bolton (2003) also link social capital to Schumpeterian entrepreneurship functions. This papers' notion of creative destruction is not related to the *neo*-Schumpeterian literature because it does not explicitly model monopoly rents. Given that this paper focuses mostly on small advancements, the use of the term best fits Schumpeter Mark I technologies.

[9] Unsurprisingly, then, the onset of market development has its social costs. Social networks lose their economic function, and, if they are not supported by other functions, may disintegrate. Some argue that there is a trade-off between "group behaviour and [economic]development", and that "the market destroys co-operation" (Heyer et al, 2002). Ciscel and Heath (2001) write of "capitalism's destruction of social capital". The point of this paper is that only one aspect of social capital (Community Social Capital) diminishes whilst market institutions continue to foster other aspects (Relational Capital).

[10] This is not uncontroversial. Harriss and De Renzio (1997) argue that "the view that rich endowment in social capitals is a precondition for 'good government' [sic] … [is] almost certainly misconceived." Leaving aside whther government or governance is actually meant, this again points to the critical importance of unpacking social capital into its various components.

[11] Alternatively, firms themselves may attempt to hinder RC replacement by employees or competitors, e.g. through anti-competition contract clauses. Still, they need a legal and political environment that allows this.

[12] Concretely, as in conventional models it is assumed that firms maximize discounted-profits and have rational expectations after the shock.

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